

polarity, wherein said first opposed surfaces of said first and second electro active substrates are in close contact;

a first electrode coupled to a junction formed by said first opposed surfaces having the same polarity;

a second electrode coupled to said second opposed surface of said first electro active substrate;

a third electrode coupled to said second opposed surface of said second electro active substrate;

a first endcap joined to said second opposed surface of said first electro active substrate;

a second endcap joined to said second opposed surface of said second electro active substrate;

first circuitry for applying a first electric field across said first and second electrodes; and

second circuitry for applying a second electric field across said first and third electrodes, said second electrical field having a phase relationship with said first electrical field, wherein the application of said first and second electrical fields causes an amplitude and phase relationship such that said electro active device produces a combined flexural and bending motion generating said directional beam.

10. (Amended) A method for generating a directional beam utilizing an electro active device comprising first and second electro active substrates each having first opposed planar surfaces of the same polarity in close contact, said first and

second electro active substrates each having a second opposed planar surface joined to an endcap having a truncated conical shape, said method comprising: applying a first electrical field to a said first electro active substrate; applying a second electrical field to said second electro active substrate, wherein said first and second electrical fields have an amplitude and phase relationship such that said electro active device produces a combined flexural and bending motion, thereby producing said directional beam.

17. (Amended) A vibration production system comprising:

a plurality of electro active devices for generating a directional beam of vibration arranged in an array, each electro active device having:

first and second electro active substrates each having first and second opposed continuous planar surfaces wherein each of said first opposed surfaces have a polarity and each of said second opposed surfaces have an opposite polarity, wherein said first opposed surfaces of said first and second electro active substrates are in close contact;

a first electrode coupled to a junction formed by said first opposed surfaces having the same polarity;

a second electrode coupled to said second opposed surface of said first electro active substrate;

a third electrode coupled to said second opposed surface of said second electro active substrate;

a first endcap joined to said second opposed surface of said first electro active substrate; and

a second endcap joined to said second opposed surface of said second electro active substrate;

first circuitry for applying a first electric field across said first and second electrodes of said electro active devices; and

second circuitry for applying a second electric field across said first and third electrodes of said electro active devices, said second electrical field having a phase relationship with said first electrical field, wherein the application of said first and second electrical fields causes an amplitude and phase relationship such that each of said electro active devices produces a combined flexural and bending motion generating a directional beam.

REMARKS

Claims 1-8 and 10-17 are pending in the application. Claims 1, 10 and 17 have been amended. Reconsideration of this application is respectfully requested.

Claim 1 has been amended to clarify that the directional beam generated by the combined flexural and bending motion is the directional beam recited in line 1. Claim 10 has been amended to conform to the language of claim 1 by adding the phrase "thereby producing said directional beam". Claim 17 has been amended to also conform to the language of claim 1 by adding the first and second circuitry language of the last two paragraphs of claim 1. It is submitted that the amendment to claim 1 merely corrects an antecedent issue and that the amendments to claims 10 and 17 merely add language already appearing in claim 1. Therefore, it is submitted that these amendments do not raise any new issue that requires further consideration and/or search.